OCR Report to Centres

January 2013
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This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

OCR will not enter into any discussion or correspondence in connection with this report.

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Foundations of Advanced Mathematics – 6989

There were just over 500 entries for this series. The mean mark was 27.1. The minimum mark scored by one candidate was 6 and eight candidates scored the maximum mark of 40.
In 22 questions at least one candidate offered no answer and in some cases there were quite a number of such omissions. These were scattered throughout the paper so this did not provide any evidence that candidates found the paper too long.

In all questions each of the distracting answers was selected by at least one candidate.

On this paper there was no question where the wrong response was selected by more candidates than the right response, but in 7 questions fewer than 50% chose the correct response.

As in previous series here is a summary of questions and topics with the approximate percentage of candidates giving the correct responses. From this table can be seen the questions for which the correct response was selected by fewer than half the candidates.

<table>
<thead>
<tr>
<th>Question</th>
<th>Topic</th>
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| 91 – 100% | 2 Arithmetic – conversions  
3 Probability |
| 81 – 90% | 6 Arithmetic – fractions  
10 Arithmetic – ratios  
11 Graphs – distance-time graph  
12 Arithmetic – order of operations and indices  
17 Statistics – interpretation of bar chart  
21 Algebra – factorisation of quadratic expressions  
32 Arithmetic – standard form  
37 Statistics – range  
38 Statistics – random sampling |
| 71 – 80% | 5 Algebra – solution of inequalities  
9 Algebra – solution of equations  
15 Algebra – changing the subject of formulae  
20 Algebra – solution of simultaneous equations  
28 Statistics – interpretation of table, mean and range  
35 Statistics – interpretation of table, median and range  
39 Algebra – indices |
| 61 – 70% | 1 Arithmetic  
7 Arithmetic – interpretation of large numbers  
14 Graphs – coordinates  
16 Algebra – construction of formula  
19 Graphs – conversion graph  
23 Arithmetic – reasonable units  
25 Algebra – solution of a quadratic equation by formula  
34 Statistics – probability and pie chart  
36 Statistics – averages |
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51 – 60%
13 Trigonometry
18 Arithmetic – error bounds
26 Algebra – sequences and equations
27 Graphs – interpretation of cubic curve
29 Trigonometry – 3D problem
40 Graphs – construction of quadratic function for curve.

41 – 50%
4 Mensuration
8 Algebra – addition of algebraic fractions
22 Vectors
24 Probability
30 Graphs – construction of equation for a straight line
31 Vectors
33 Trigonometry

Answers.
1 B 21 C
2 D 22 B
3 C 23 A
4 D 24 B
5 C 25 A
6 C 26 A
7 A 27 C
8 C 28 C
9 C 29 C
10 C 30 B
11 B 31 C
12 A 32 A
13 C 33 B
14 B 34 D
15 D 35 A
16 C 36 D
17 D 37 B
18 A 38 C
19 D 39 B
20 D 40 D
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